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PATENT
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Remarks/Arguments

Status of Claims

Claims 1 and 15-25 are currently pending. Claims 1 and 15-25 stand rejected. Claims 2 to 14 have been previously cancelled. Claims 1 and 15-25 are amended herein to more particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Claims 26 - 27 are added.

Rejections Under 35 U.S.C. § 103(a)

Claims 1, 16, 18, 20, 22, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura Pub. No.: US 2003/0193451 A1 in view of Hashimoto Pub. No.: US 2003/00076338 A1.

The Applicants respectfully disagree with the Examiner's findings. Specifically, Kimura teaches to change the number of bits used for the encoding depending on the APL (Average Picture Level), in order to reduce the pseudo-framing noise and to improve the gray-scale. The Examiner's attention is directed to paragraph [0112], citing Fig. 2 as illustrating an example of a plasma display panel having pixels arranged in a predetermined pattern. This is just an example of a video pattern - the pixels in the area A have a value of 128, in B 127, in C 126, in D 125 and in E 0. This only teaches that encoding, depending on the APL, shall be performed. However, there is no further teaching nor suggestion of encoding the video levels with subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords.

Claim 1 has been amended to require *encoding the video levels* of said video data in a predetermined border area surrounding said central area of said display screen *by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords* to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

As recited in claim 1, the present invention teaches that (for the border area) all video inputs (from 0 to 255 in case of 8 bit input) are encoded with subfield codewords, which *do*

not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords.

In Figure 2 of Kimura, only 5 video levels are visible, and there is no teaching nor suggestion on how the encoding is performed for the other video levels. As required by amended claims 1 and 20, all codewords having a 1 'after' (i.e. temporally after) a 0, in a selectable part of the codewords, shall not be allowed in the border area as ON cells which pollute OFF cells and this pollution will disturb the writing of the next sub-field.

Priming is used to ionize the gas in the plasma cell, and during writing these ions move towards the electrodes creating a load in the cell so that the light pulses can happen during the sustain pulses. But in the "open space" on the border area, when the cell A is OFF and when the neighbor cells are ON, during the writing phase the ions of the cell A will move towards the electrodes of the neighboring cells, so that there are less ions remaining in the cell A after this subfield. Priming would bring all the cells to the same state and reduces the maximal available darkroom contrast.

Since there are fewer ions in the cell A, the next writing will not be as effective in the cell A. In order to reduce the total amount of priming, according to the present invention it is suggested to modify the codeword at the panel border so that critical situations like that depicted in Figure 5 of the present invention can no longer happen.

For the reasons mentioned above, it is believed that the subject matter sought to be patented and the prior art are not such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Further evidence that the present invention is patentable over Kimura in view of Hashimoto is the fact that according to Hashimoto the neighboring pixel information (peripheral pixel information) is used to determine the encoding of a pixel. (see Figures 2 and 20 of Hashimoto). In fact, the Examiner has pointed out this fact in paragraphs 5 and 6 of the current Office Action. Hashimoto, in Figure 20, discloses the relationship between positions of the noted cell and the neighboring reference cell (see [0124]). Therefore, Hashimoto teaches away from the present invention, wherein the not used codewords are independent from the neighboring cell.

Amended claim 1 requires a method that is independent from the information of neighboring pixel as only *those subfield codewords of said number of subfield codewords (shall be used), which do not have a change of a subfield bit from a binary 0 to a binary 1 in*

a selectable part of the subfield codewords to prevent in said border area a cell which was

not activated for a subfield in said selectable part from being activated for a following

subfield in said selectable part, in order to avoid a response fidelity problem in said border

area.   Furthermore, Hashimoto discloses a method to reduce pseudo contours and flicker.

This is done on the whole display, and not specifically in the boarder area.

Regarding claim 1, the Examiner cites Kimura, paragraph [0021], which reads: "In

FIG. 2, an area A has a signal level of 128 luminance. In other words, a signal of (1000

0000) level is applied to each of pixels in the area A, if the luminance is expressed in a binary

code. An area B has a signal level of 127 luminance. That is, a signal of (0111 1111) level is

applied to each of pixels in the area B. An area C has a signal level of 126 luminance. That

is, a signal of (0111 1110) level is applied to each of pixels in the area C. An area D has a

signal level of 125 luminance. That is, a signal of (0111 1101) level is applied to each of

pixels in the area D. An area E has a signal level of 0 luminance. That is, a signal of

(00000000) level is applied to each of pixels in the area E." Kimura neither teaches nor

suggests the elements of claim 1. According to paragraph [0041] of Kimura, a change from 0

to 1 is allowed in the border area, as [0041] reads: " ... this means that an uppermost bit is

compulsorily changed to "1" from "0" ...". That which Kimura lacks is neither taught in

Hashimoto.

Furthermore, regarding *the illuminating pixels in a border area surrounding said*

central area of said display screen by using only those codewords, the Examiner cited

Hashimoto Figure 20. However, Figure 20 neither teaches nor suggests that encoding or

illuminating pixels in a border area and "FIG. 20 shows an example of the relationship

between positions of the noted cell and the neighboring reference cell." (See Hashimoto

paragraph [0124]) Hashimoto's teachings deviate from the teachings in the present

invention, wherein the not used codewords are independent from the neighboring cell.

Like claim 1, claim 20 requires illuminating pixels in a border area surrounding said

central area of said display screen by *using only those subfield codewords of said number of*

subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary

1 in a selectable part of the subfield codewords. For the reasons discussed above, claim 20 is

patentably distinct form Kimura, because Kimura fails to teach or suggest the illuminating

pixels in a border area . . . *using only those subfield codewords of said number of subfield*

codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a

selectable part of the subfield codewords. That which Kimura lacks, is neither taught nor suggested by Hashimoto.

Therefore, neither Kimura nor Hashimoto neither alone nor in combination disclose the present invention as disclosed in independent claims 1 and 20. Reconsideration and withdrawal of the rejection of claims 1 and 20, under 35 U.S.C. § 103(a), is therefore requested.

Since, claims 16, 18, 22, 24 dependent from independent claims 1 and 20, reconsideration and allowance of rejected claims 16, 18, 22, 24 is therefore requested.

Claims 15, 17, 19, 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura Pub. No.: US 2003101 9345 1 A1 in view of Hashimoto Pub. No.: US 2003/00076338 A1 further in view of Hoppenbrouwers et al. Pub. No.: US 6,727,913 B2.

The Applicants respectfully disagree with the Examiner's findings, since claims 15, 17, 19, 21, 23, and 25 depend from independent claims 1 and 20. For the reasons discussed above, reconsideration and allowance of rejected dependent claims 17, 19, 21, 23, and 25 is therefore requested.

Conclusion

For all of the foregoing reasons and in view of the foregoing amendments, Applicants respectfully contend that the application is now in condition for allowance. Accordingly, Applicants respectfully request entry of the foregoing amendments, reconsideration and allowance of claims 1 and 15-27, and issuance of a Patent for the subject invention. If the Examiner cares to discuss anything presented here to further prosecution of this application, he is invited to contact the undersigned Attorney for the Applicants. Please charge the $490 fee for the Two Month Extension, and the $220 fee for the additional independent claim, and any other additional requisite fees that may be due, to Deposit Account No. 07-0832.
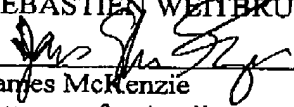
Respectfully submitted,

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